

CPC**COOPERATIVE PATENT CLASSIFICATION****C22F**

CHANGING THE PHYSICAL STRUCTURE OF NON-FERROUS METALS AND NON-FERROUS ALLOYS (surface treatment of metallic material involving at least one process provided for in class [C23](#) and at least one process covered by this subclass, [C23F 17/00](#))

C22F 1/00

Changing the physical structure of non-ferrous metals or alloys by heat treatment or by hot or cold working (apparatus for mechanical working of metal [B21](#) , [B23](#) , [B24](#))

C22F 1/002

- . { by rapid cooling or quenching; cooling agents used therefor }

C22F 1/004

- . { Heat treatment in fluid bed }

C22F 1/006

- . { Resulting in heat recoverable alloys with a memory effect }

C22F 1/008

- . { Using a protective surface layer }

C22F 1/02

- . in inert or controlled atmosphere or vacuum (adjusting the composition of the atmosphere [C21D 1/76](#))

C22F 1/04

- . of aluminium or alloys based thereon

C22F 1/043

- .. of alloys with silicon as the next major constituent

C22F 1/047

- .. of alloys with magnesium as the next major constituent

C22F 1/05

- .. of alloys of the Al-Si-Mg type, i.e. containing silicon and magnesium in approximately equal proportions

C22F 1/053

- .. of alloys with zinc as the next major constituent

C22F 1/057

- .. of alloys with copper as the next major constituent

C22F 1/06

- . of magnesium or alloys based thereon

C22F 1/08

- . of copper or alloys based thereon

C22F 1/10

- . of nickel or cobalt or alloys based thereon

C22F 1/11

- . of chromium or alloys based thereon

C22F 1/12

- . of lead or alloys based thereon

C22F 1/14

- . of noble metals or alloys based thereon

C22F 1/16

- . of other metals or alloys based thereon

C22F 1/165

- .. { of zinc or cadmium or alloys based thereon }

C22F 1/18

- .. high-melting or refractory metals or alloys based thereon

C22F 1/183

- ... { of titanium or alloys based thereon }

C22F 1/186

- ... { of zirconium or alloys based thereon }

C22F 3/00

Changing the physical structure of non-ferrous metals or alloys by special physical methods, e.g. treatment with neutrons

C22F 3/02

- by solidifying a melt controlled by supersonic waves or electric or magnetic fields